# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start		Rating **	Α	Issue No.		4		
LM End		Issue Type +	Ma	Location *		N/A		
Category	Earthen L	evee		GPS Latitude/Longitude				
Calegory				Start		End		
Operations & Maintenance				0		0		
пеш	Manuals				0		0	
DWR ID DWR_RD2089_01_s _ 2013_4								
		Comn	nent Cod	de				
		Inspecto	or Comm	nent				
The O&M	Manual is	available at th	e LMA's	office.				

No Photos

Rating \*\* Issue No. Α 15 LM Start Issue Type + Ма Location \* N/A LM End Earthen Levee GPS Latitude/Longitude Category Start End Emergency Supplies & Item Equipment DWR\_RD2089\_01\_s \_ 2013\_15 DWR ID Comment Code

No Photos

Inspector Comment The LMA has flood fighting supplies on-site.

LM Start		Rating **	M	Issue No.		34		
LM End		Issue Type +	Ма	Location *		N/A		
Category	Category Earthen Levee					le/Longitude		
Category				Start		End		
Item	Flood Preparedness & Training				0		0	
пеш					0		0	
DWR ID	DWR_RD2	089_01_s _ 201	3_34					
		Comn	nent Cod	le				
	Inspector Comment							
The LMA h	as not atte	ended a flood	fight trai	ning class i	n th	e past few		

No Photos

\* Location

years. They do have an emergency plan.

LS: Land Side WS: Water Side

N/A: Not Applicable

A : Acceptable M : Minimally Acceptable

U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.02	Rating **	М	Issue No.		12	
LM End	0.02	Issue Type +	Ma	Location *		CR	
Category	Earthen L	GPS La	atitud	e/Longitude			
Calegory				Start		End	
Item		rface / Depres	ssions /	37.8115	37°	37.811537	0
пеш	Rutting			-121.385354°		-121.385354	0
DWR ID	DWR ID DWR_RD2089_01_s _ 2019_12						
		Comn	nent Cod	de			
C2 : Repai	r depressi	ons or ruts in	the crow	n or slope.			
		Inspecto	or Comm	nent			

No Photos

LM Start	0.03	Rating **	U	Issue No.		24	
LM End	0.75	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitud			
Calegory				Start		End	
Item	Vegetatio	etation		37.8115	18°	37.809016	0
пеш				-121.3853	62°	-121.397481	٥
DWR ID	DWR_RD2	089_01_f _ 201	9_24				

Comment Code

V2 : Remove the wild growth other than native grasses from the levee slopes.

### Inspector Comment

Vegetation on landside slope needs to be maintained to allow access and visibility.

LM Start	0.03	Rating **	U	Issue No.	24 (cont)
LM End	0.75	Issue Type +	Ma	Location *	LS

### Photo 1 of 2: FA\_2019\_RD2089\_316\_24\_20191121\_00055.jpg



View of vegetation on landside slope. Fall 2019

Photo 2 of 2: FA\_2019\_RD2089\_316\_24\_20191121\_00061.jpg



View of vegetation on landside slope. Fall 2019

\* Location

LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown

\*\* Rating

A : Acceptable N : Not Inspected/Rated M : Maintenance Deficiancy

M : Minimally Acceptable CR : Corrected Ob : Design & System Obsolescence

U : Unacceptable A/W : Acceptable but Monitor & Maintain

\*\* Rating

A : Not Applicable M : Maintenance Deficiancy

Ob : Design & System Obsolescence

En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.03	Rating **	U	Issue No.		16		
LM End	1.52	Issue Type +	Ма	Location *	WS			
Category	Earthen L	evee		GPS Latitude/Longitude				
Calegory				Start		End		
ltom	ltem Vegetation			37.8115 <sup>2</sup>	17°	37.806675°		
пеш				-121.38536	62°	-121.407951°		
DWR ID	DWR_RD2089_01_f _ 2019_16							
	Comment Code							

 $\ensuremath{\text{V2}}$  : Remove the wild growth other than native grasses from the levee slopes.

#### Inspector Comment

Vegetation on waterside slope needs to be maintained to allow access and visibility.

LM Start	0.03	Rating **	U	Issue No.	16 (cont)
LM End	1.52	Issue Type +	Ma	Location *	WS

# Photo 1 of 2 : FA\_2019\_RD2089\_316\_16\_20191121\_00054.jpg



View of vegetation on waterside slope. Fall 2019

Photo 2 of 2: FA\_2019\_RD2089\_316\_16\_20191121\_00062.jpg



View of vegetation on waterside slope. Fall 2019

LM Start	0.03	Rating **	U	Issue No.		18		
LM End	0.03	Issue Type +	Ma	Location *		LS		
Catagory	Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End		
Item	Trim / Thin Trees			37.811518°		37.811518°		
item					30°	-121.385430°		
DWR ID	DWR_RD2	089_01_f _ 201	8_18					
		Comn	nent Cod	de				
T2: Thin trees to allow visibility of the ground and room to flood fight.								

Inspector Comment



Looking west at untrimmed trees on landward slope. (Fall 2018)

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated Ma: Maintenance Deficiancy

M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

C: Corwn

A: Rating

A: Hssue Type

Ma: Maintenance Deficiancy

Ob: Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.03	Rating **	М	Issue No.		1		
LM End	0.03	Issue Type +	Ма	Location *	LS			
Category	Earthen Levee			GPS La	atitud	e/Longitude		
Calegory			Start		End			
Item			37.8115	° 80	37.811508°			
			-121.385464 °		-121.385464°			
DWR ID DWR_RD2089_01_s _ 2012_1								
Comment Code								
ST : Stairv	<i>ı</i> ay							
		Inanaati	or Comm	n a m t				
		•	or Comn	ient				
Steps have	e been cut	into the levee	slope.					

LM Start	0.03	Rating **	М	Issue No.	1 (cont)
LM End	0.03	Issue Type +	Ma	Location *	LS



View of the stairs eroding into the landside levee slope.

Photo 2 of 2 : FA\_2019\_RD2089\_316\_1\_20190830\_00002.jpg

View of the stairs eroding into the landside levee slope. (Fall 2018)

LM Start	0.09	Rating **	М	Issue No.		21		
LM End	0.09	Issue Type +	Ма	Location *	LS			
Category	Earthen L	GPS La	atitud	e/Longitude				
Calegory				Start		End		
Item	Trim / Thi	n Trees		37.8112	68°	37.811268°		
item			-121.386521 °		-121.386521°			
DWR ID DWR_RD2089_01_s _ 2019_21								
		Comn	nent Cod	de				
T1: Trim t	rees to at l	east five feet	above g	round level.				
			_					
		Inspecto	or Comm	nent				

No Photos

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.26	Rating **	М	Issue No.		13
LM End	0.27	Issue Type +	Ма	Location *		WS
Category Supplemental			GPS Latitude/Longitude			
Calegory			Start		End	
Item	2017 Stor	m Damage		37.8103	00°	37.810300°
пеш				-121.3893	00°	-121.389500°
DWR ID	LMA-419					·

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:513

Site Designation:LMA-419 Repair Type: Erosion Rating:Area of Concern Field Date:8/14/2017 Notes: Small erosion at toe.

LM Start	0.26	Rating **	М	Issue No.	13 (cont)
LM End	0.27	Issue Type +	Ma	Location *	WS



Photo 2 of 2: LEVAL\_FA\_2019\_513\_4448.jpg



N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type
Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.32	Rating **	М	Issue No.		26	
LM End	0.32	Issue Type +	Ma	Location *		LS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Item	Trim / Thin Trees			37.810030°		37.810030°	
пеш			-121.390476°		-121.390476°		
DWR ID	DWR_RD2	089_01_s _ 201	9_26				
		Comn	nent Cod	le			
T4: Trim t	rees over	roadway to at	least 12	feet above	grou	und level.	
		Inspecto	or Comm	ent			

No Photos

Rating \*\* С Issue No. 0.45 LM Start 19 0.45 Issue Type + Location \* LM End Ma Supplemental GPS Latitude/Longitude Category Start End **DWR Erosion Survey** 37.809394° 37.809394° Item -121.392791 -121.392791 RD2089U01RM29.8 DWR ID Comment Code

No Photos

### Inspector Comment

Site ID: RD2089U01RM29.8

10/30/2019: No new erosion was found at the repaired site.

09/13/2017: This erosion site has been repaired.

07/25/2016: No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: No significant change observed.

08/07/2012: The site has been visited by boat survey. No significant

change observed

08/23/2011: The site shows loose material around the pipe crossing. The operation of the pipe might have caused an impact on the levee.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.54	Rating **	М	Issue No.		14	_
LM End	0.54	Issue Type +	Ma	Location *	CR		
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory		Start		End			
Item	Crown Surface / Depressions /			37.810087°		37.810087	0
пеш	Rutting	-121.394200 °		-121.394200	0		
DWR ID	DWR_RD2	089_01_s _ 201	2_14				
		Comn	nent Coc	de			
C3: Add a	ppropriate	gravel or roa	d base.	Grade and	com	pact.	
	Inspector Comment						



11/10/2011 Depressions in crown.

LM Start	0.58	Rating **	M	Issue No.	35		
LM End	0.58	Issue Type +	Ma	Location *	LS		
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Item	Trim / Thi	n Trees		37.81020	3°	37.810203°	
ILEIII				-121.39487	'8°	-121.394878 °	
DWR ID	DWR_RD2089_01_f _ 2019_35						
		0		I.			

Comment Code

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

	LM Start	0.62	Rating **	M	Issue No.	36		
	LM End	0.62	Issue Type +	Ma	Location *	LS		
	Category	Earthen L	evee	GPS Latitude/Longitude				
					Start		End	
	Item	Trim / Thin Trees			37.8101	44 °	37.810144	٥
	Item				-121.3955	78°	-121.395578	٥
	DWR ID	DWR_RD2	089_01_f _ 201					
	Comment Code							

T3: Trim and thin trees to allow visibility of the ground and room to

Inspector Comment

No Photos

\* Location LS : Land Side WS: Water Side

flood fight.

N/A: Not Applicable

A : Acceptable M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected

A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En: Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.66	Rating **	A/W	Issue No.		5
LM End	0.66	Issue Type +	Ма	Location *		
Category Supplemental				GPS Latitude/Longitude		
Calegory	egory			Start		End
Item	DWR Ero	sion Survey		37.80978	30°	37.809780°
пеш				-121.39623	30°	-121.396230°
DWR ID	RD2089U0	1RM29.61				

#### Inspector Comment

Comment Code

Site ID: RD2089U01RM29.61

08/14/2019: No significant change observed.

09/13/2017: No significant change observed.

07/25/2016: No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: No significant change observed.

08/07/2012: The site has been visited by boat survey. No significant change observed

08/23/2011: The 5-foot vertical scarp shows no significant change from the last year inspection. No new erosion activities observed. Dense white willow trees on site.

09/07/2010: It was difficult to view the erosion due to the thick Willow thickets and other vegetation at the water line. At the time of the inspection, there were no signs of repair on site. As noted during the last survey, there is a 5-foot vertical scarp along the lower slope that may be subjected to high flow velocities.

08/05/2010: Recommended for repair, per CLRO; "Erosion of this site may be subjective to rapid rates of erosion."

09/28/2009: No major change observed; 5-foot vertical scarp is immediately downstream of where berm has tapered; site is recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM29.6, LM0.60; previously rated "U".

11/05/2008: No change observed; rodent holes on lower slope; wide levee crown.

LM Start	0.66	Rating **	A/W	Issue No.	5 (cont)
LM End	0.66	Issue Type +	Ma	Location *	

# Photo 1 of 2 : SJR2019\_RD2089U01RM29.61\_6.jpg



Front view of the site.

### Photo 2 of 2: SJR2019\_RD2089U01RM29.61\_5.jpg



Front view of the site. Note the very dense white willow thickets on site.

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated C: Corrected Ob: Design & System Obsolescence Obsolescence

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.67	Rating **	A/W	Issue No.		20
LM End	0.68	Issue Type +	Ma	Location *		
Category				GPS Latitude/Longitude		
Calegory				Start		End
Item	2017 Stor	m Damage		37.80970	00°	37.809700°
пеш			-121.39630	00°	-121.396400°	
DWR ID	LMA-418					,

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:512

Site Designation:LMA-418 Repair Type: Erosion

Repair Type: Erosion Rating:Serious Field Date:8/14/2017

Notes: deep erosion more than half way up slope.

LM Start	0.67	Rating **	A/W	Issue No.	20 (cont)
LM End	0.68	Issue Type +	Ma	Location *	



Photo 2 of 3: LEVAL\_FA\_2019\_512\_4458.jpg



### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.67	Rating **	A/W	Issue No.		20 (cont)
LM End	0.68	Issue Type +	Ma	Location *		
Category				GPS Latitude/Longitude		
Calegory				Start		End
Item	2017 Stor	m Damage		37.8097	00°	37.809700°
пеш				-121.3963	00°	-121.396400°
DWR ID	LMA-418					

### Comment Code

### Inspector Comment

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:512

Site Designation:LMA-418 Repair Type: Erosion Rating:Serious Field Date:8/14/2017

Notes: deep erosion more than half way up slope.



LM Start	0.83	Rating **	U	Issue No.		27
LM End	1.51	Issue Type +	Ma	Location *	LS	
Category Earthen Levee				GPS La	titud	le/Longitude
Calegory				Start		End
Item	Vegetatio	n		37.8079	91 °	37.806638°
item				-121.3978	47 °	-121.407833°
DWR ID	DWR_RD2	089_01_s _ 201	9_27			

#### Comment Code

V2 : Remove the wild growth other than native grasses from the levee slopes.

### Inspector Comment

Vegetation on landside slope needs to be maintained to allow access and visibility.

### Photo 1 of 1: FA\_2019\_RD2089\_316\_27\_20190830\_00025.jpg



View of vegetation on landside slope. (spring 2019)

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.86	Rating **	М	Issue No. 37		37	_
LM End	0.86	Issue Type +	Ма	Location * LS		LS	
Cotagon Earthen Levee				GPS La	titud	e/Longitude	
Calegory	Category					End	
ltom	Trim / Thi	n Trees		37.8075	19°	37.807519	0
пеш	Item				30°	-121.397780	0
DWR ID DWR_RD2089_01_f _ 2019_37							
Comment Code							

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

No Photos

LM Start	0.94	Rating **	M	Issue No.		38
LM End	0.94	Issue Type +	Ma	Location *		LS
Category	Earthen L	GPS Latitude/Longitude				
Calegory		Start		End		
Item	Trim / Thin Trees			37.8064	03°	37.806403 °
пеш				-121.3977	79°	-121.397779 °
DWR ID	DWR_RD2	089_01_f _ 201	9_38			·

Comment Code

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

LM Start	0.96	Rating **	М	Issue No.		39		
LM End	0.96	Issue Type +	Ma	Location *		LS		
Earthen Levee				GPS Latitude/Longitude				
Calegory	Category					End		
Item	Trim / Thi	n Trees		37.8062	53°	37.806253°		
item				-121.3980	70°	-121.398070 °		
DWR ID DWR_RD2089_01_f _ 2019_39								
	0 10 1							

Comment Code

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

\* Location

LS: Land Side N/A: Not Applicable

WS: Water Side CR : Crown

A : Acceptable M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.00	Rating **	М	Issue No.		40	
LM End	1.00	Issue Type +	Ma	Location *		LS	
Catagory	Earthen L	evee		GPS La	atitud	e/Longitude	
Category				Start		End	
Item	Trim / Thin Trees			37.806107°		37.806107°	
пеш				-121.398771 °		-121.398771 °	
DWR ID	DWR_RD2	089_01_f _ 201	9_40				
		Comn	nent Cod	de			
T3 : Trim and thin trees to allow visibility of the ground and room to flood fight.							
Inspector Comment							

No Photos

Issue No. Rating \*\* 1.07 Μ 41 LM Start 1.07 Issue Type + Ма Location \* LS LM End Earthen Levee GPS Latitude/Longitude Category Start End Trim / Thin Trees 37.805861° 37.805861 ° Item -121.399976 ° -121.399976 ° DWR\_RD2089\_01\_f \_ 2019\_41 DWR ID **Comment Code** 

No Photos

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

U : Unacceptable

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.16	Rating **	A/W	Issue No.		30
LM End	1.18	Issue Type +	Ma	Location *		WS
Category	ental	GPS Latitude/Longitude				
Calegory	tegory					End
Item	2017 Storm Damage			37.8056	00°	37.805600°
пеш		-121.4017	00°	-121.401900°		
DWR ID	LMA-417					

# Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:511

Site Designation:LMA-417

Repair Type: Erosion Rating:Critical Field Date:8/16/2017

Notes: Narrow levee with over steep slope

LM Start	1.16	Rating **	A/W	Issue No.	30 (cont)
LM End	1.18	Issue Type +	Ma	Location *	WS



Photo 2 of 3: LEVAL\_FA\_2019\_511\_4303.jpg



### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.16	Rating **	A/W	Issue No.		30 (cont)	
LM End	1.18	Issue Type +	Ma	Location *	WS		
Supplemental				GPS Latitude/Longitude			
Calegory				Start		End	
Item	2017 Stor	m Damage		37.80560	o°	37.805600°	
пеш		-121.40170	o°	-121.401900°			
DWR ID	LMA-417						

# Comment Code

#### Inspector Comment

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:511

Site Designation:LMA-417 Repair Type: Erosion Rating:Critical

Field Date:8/16/2017

Notes: Narrow levee with over steep slope



LM Start	1.17	Rating **	A/W	Issue No.		3
LM End	1.17	Issue Type +	Ma	Location *		
Category	Suppleme	ental		GPS La	titud	e/Longitude
Category				Start		End
Item	DWR Ero	sion Survey		37.8055	23°	37.805523°
item				-121.4017	18°	-121.401718°
DWR ID	RD2089U0	1RM29.1				

#### Comment Code

### Inspector Comment

Site ID: RD2089U01RM29.1

09/26/2019: No significant change observed.

09/13/2017: The erosion is at the upstream of a small tree, inside of a slight river bend.

Photo 1 of 2: SJR2019\_RD2089U01RM29.10\_1.jpg



Looking at the erosion from levee top.

\*\* Rating

A : Acceptable

M : Minimally Acceptable

U : Unacceptable

N: Not Inspected/Rated C: Corrected A/W: Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsole

Ob : Design & System Obsolescence En : Enforcement

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### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.17	Rating **	A/W	Issue No. 3 (cont)		3 (cont)	
LM End	1.17	Issue Type +	Ма	Location *			
Category	ental	GPS Latitude/Longitude					
Calegory	Category					End	
Item	DWR Ero	sion Survey		37.8055	23°	37.805523°	
пеш	em				18°	-121.401718°	
DWR ID RD2089U01RM29.1							
Comment Code							

### Inspector Comment

Site ID: RD2089U01RM29.1

09/26/2019: No significant change observed.

09/13/2017: The erosion is at the upstream of a small tree, inside of a slight river bend.



Close-up view of the erosion. Note the trees next to the erosion site.

LM Start	1.22	Rating **	М	Issue No.		2
LM End	1.23	Issue Type +	Ма	Location *		
Category				GPS Latitude/Longitude		
Calegory	Category					End
Item	DWR Ero	sion Survey		37.8055	30°	37.805580°
пеш				-121.4030	10°	-121.403010 °
DWR ID	RD2089U0	1RM29.04				

### Inspector Comment

Comment Code

Site ID: RD2089U01RM29.04

09/26/2019: No significant change observed.

09/13/2017: No significant change observed. More vegetation observed at the site.

09/16/2016: The river was not navigable near the site due to the dense water grass, so the site was visited by land survey. No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: The erosion is around a tree at the levee toe. Dense vegetation is visible.

### Photo 1 of 2: SJR2019\_RD2089U01RM29.04\_2.JPG



Looking at the erosion from levee top.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.22	Rating **	М	Issue No.		2 (cont)
LM End	1.23	Issue Type +	Ma	Location *		
Category	ental	GPS Latitude/Longitude				
Calegory			Start		End	
Item	DWR Ero	sion Survey		37.8055	80°	37.805580°
item				-121.4030	10°	-121.403010 °
DWR ID RD2089U01RM29.04						
Comment Code						

### Inspector Comment

Site ID: RD2089U01RM29.04

09/26/2019: No significant change observed.

09/13/2017: No significant change observed. More vegetation observed at the site.

09/16/2016: The river was not navigable near the site due to the dense water grass, so the site was visited by land survey. No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: The erosion is around a tree at the levee toe. Dense vegetation is visible.



Close-up view of the erosion.

LM Start	1.22	Rating **	М	Issue No.		43
LM End	1.22	Issue Type +	Ma	Location *		CR
Category	evee	GPS La	atitud	e/Longitude		
Calegory				Start		End
Item	Crown Su	ssions /	37.8057	'35 °	37.805735°	
пеш	Rutting			-121.4026	14°	-121.402614°
DWR ID	DWR_RD2	089_01_s _ 201	2_43			
Comment Code						
C3 : Add a	C3 : Add appropriate gravel or road base. Grade and compact.					

### Inspector Comment

### Photo 1 of 1: FA\_2019\_RD2089\_316\_43\_20190830\_00033.jpg



View of depression in roadway. 11/10/2011

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.22	Rating **	М	Issue No.		42
LM End	1.22	Issue Type +	Ma	Location *		LS
Cotogon/ Earthen Levee				GPS La	atitud	le/Longitude
Category	negory					End
Item	Trim / Thi	n Trees		37.8057	66 °	37.805766°
пеш				-121.4027	48 °	-121.402748°
DWR ID	DWR ID DWR_RD2089_01_f _ 2019_42					
Comment Code						
T0 T:	1.01.1					

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

LM Start	1.23	Rating **	М	Issue No.		44
LM End	1.23	Issue Type + Ma Location *		Location *		LS
Category	Earthen L	evee		GPS La	tituc	le/Longitude
Calegory		Start		End		
Item		rface / Depres	ssions /	37.80580	)1 °	37.805801 °
item	Rutting			-121.40291	ı3°	-121.402913 °
DWR ID	DWR_RD2	089_01_s _ 201	2_44			

Comment Code

C3: Add appropriate gravel or road base. Grade and compact.

Inspector Comment



View of roadway depression. 11/10/2011

LM Start	1.34	Rating **	М	Issue No.		45	
LM End	1.34	Issue Type +	Ma	Location *	CR		
Category	evee	GPS Latitude/Longitude					
Calegory			Start		End		
Item		rface / Depres	ssions /	37.80612	28°	37.806128°	
item	Rutting			-121.40489	90°	-121.404890°	
DWR ID	DWR ID DWR_RD2089_01_s _ 2012_45						
Comment Code							

C3: Add appropriate gravel or road base. Grade and compact.

Inspector Comment



View of roadway depression. 11/10/2011

\* Location

CR : Crown

LS: Land Side WS: Water Side

N/A: Not Applicable

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

+ Issue Type

Ma: Maintenance Deficiancy Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LNA C4	1.40	Rating **	М	Issue No.		47
LM Start	1.40	Rating	IVI	13306 140.		41
LM End	1.40	Issue Type +	Ma	Location *	* LS	
Category Earthen Levee			GPS La	titud	e/Longitude	
Category	Category			Start		End
Item	Animal Co	ontrol		37.80626	88°	37.806268 °
item				-121.40587	74°	-121.405874°
DWR ID	DWR_RD2	089_01_s _ 201	2_47			
Comment Code						
	A3 : No rodents visible, but rodent burrows visible; need to backfill and					

compact or grout burrows.

Inspector Comment



View of active rodent burrow on landside slope. 11/10/2011

LM Start	1.41	Rating **	М	Issue No.		46	
LM End	1.41	Issue Type +	Ма	Location *	LS		
Category Earthen Levee				GPS La	titud	e/Longitude	
				Start		End	
Itom	Trim / Thi	n Trees		37.8062	99°	37.806299°	
item	Item				10°	-121.406010 °	
DWR ID DWR_RD2089_01_f _ 2019_46						·	
	Comment Code						

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.41	Rating **	М	Issue No.		53	
LM End	1.41	Issue Type +	Ma	Location *			
Category	Supplemental				GPS Latitude/Longitude		
Calegory		Start		End			
Item		WR UCIP LM	A	37.80632	23 °	37.806323°	
пеш	Responsil	oility		-121.4061	55 °	-121.406155°	
DWR ID	23045						

### Inspector Comment

Comment Code

DS\_ID:23045 FS\_ID:21585 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: - siphon breaker needs repair.

FIELD\_STRUCT\_DESC: 10-inch steel drainage discharge pipe through the levee, 2.4 feet below the crown. Pump in a drainage ditch on the landside (LS). Siphon breaker on the waterside (WS) shoulder.

[Additional Reference(s): DWR Levee Log, 1991].

FS Date: 9/12/2013

LM Start	1.41	Rating **	M	Issue No.	53 (cont)
LM End	1.41	Issue Type +	Ma	Location *	

# Photo 1 of 3: UCIP\_FA\_2019\_21585\_36624.jpg



WS view: exposed steel pipe on levee slope. A pvc pipe on left.

### Photo 2 of 3: UCIP\_FA\_2019\_21585\_36623.jpg



WS view: exposed steel pipe with siphon breaker. Looks siphon breaker needs repair.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.41	Rating **	М	Issue No.		53 (cont)	
LM End	1.41	Issue Type +	Ma	Location *			
Category	Suppleme	ental		GPS La	tituc	le/Longitude	
Calegory				Start		End	
ltom		RAFT DWR UCIP LMA			23 °	37.806323	۰
Item Responsibility			-121.4061	55 °	-121.406155	0	
DWR ID	23045						

### Comment Code

### Inspector Comment

DS\_ID:23045 FS\_ID:21585 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: - siphon breaker needs repair.

FIELD\_STRUCT\_DESC: 10-inch steel drainage discharge pipe through the levee, 2.4 feet below the crown. Pump in a drainage ditch on the landside (LS). Siphon breaker on the waterside (WS) shoulder.

[Additional Reference(s): DWR Levee Log, 1991].

FS Date: 9/12/2013



LS view: exposed steel pipe on levee slope.

L	.M Start	1.43	Rating **	M	Issue No.		48	
L	M End	1.43	Issue Type +	Ma	Location *	LS		
_	ategory	Earthen L	evee		GPS Latitude/Longitude			
	alegory			Start			End	
	Item	Trim / Thin Trees			37.80637	75 °	37.806375°	
	пеш				Start 37.806375 ° -121.406516 °	-121.406516 °		
	WR ID	DWR_RD2	089_01_f _ 201	9_48				
	Comment Code							

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiancy
WS: Water Side	M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence
CR : Crown	U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.51	11/20/2019 11/20/2019	Alberto De Leon

LM End 1.44 Category Earthen  Item Animal C  DWR ID DWR_RD		Ма	Start 37.8063		WS e/Longitude End 37.806383		
Category  Animal C			Start 37.8063		End		
Item Animal C	Control		37.8063	83 °			
Item	Control				37 806383 °		
					37.000303		
DWR ID DWR_RD		-121.406599° -121.4		-121.406599°			
	DWR ID DWR_RD2089_01_s _ 2012_49						
	Comment Code						
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.							
	Inspect	or Comm	nent				

Photo 1 of 1: FA\_2019\_RD2089\_316\_49\_20190830\_00037.jpg



View of deep burrow on waterside. 11/10/2011

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.00	Rating **	U	Issue No.	60		
LM End	1.34	Issue Type +	Ma	Location *	LS		
Category Earthen Levee				GPS La	GPS Latitude/Longitude		
Calegory				Start		End	
Item	Vegetation			37.8066	36°	37.819512°	
пеш				-121.4078	40°	-121.419722°	
DWR ID DWR_RD2089_02_f _ 2019_60							
		Comn	nent Coc	de			
V2 : Remove the wild growth other than native grasses from the levee slopes.							
		Inspecto	or Comm	nent			

Photo 1 of 1: FA\_2019\_RD2089\_317\_60\_20191121\_00071.jpg



View of vegetation on landside slope. Fall 2019

LM Start	0.00	Rating **	U	Issue No.		58	
LM End	1.34	Issue Type +	Ma	Location *	WS		
Category	Earthen L	arthen Levee			GPS Latitude/Longitude		
Calegory				Start		End	
Itom	Vegetatio	n	37.8066	36°	37.819608°		
item	Item			-121.4078	40°	-121.419609°	
DWR ID	DWR_RD2	089_02_s _ 201	7_58				

Comment Code V2: Remove the wild growth other than native grasses from the levee

slopes.

Inspector Comment

LM Start	0.00	Rating **	U	Issue No.	58 (cont)
LM End	1.34	Issue Type +	Ma	Location *	WS

# Photo 1 of 2: FA\_2019\_RD2089\_317\_58\_20191121\_00072.jpg



View of vegetation on waterside slope. Fall 2019

Photo 2 of 2: FA\_2019\_RD2089\_317\_58\_20190830\_00067.jpg



Typical view of vegetation on waterside slope. (Spring 2019)

\* Location + Issue Type Ma : Maintenance Deficiancy N/A: Not Applicable LS: Land Side A : Acceptable M : Minimally Acceptable N : Not Inspected/Rated WS: Water Side C : Corrected Ob : Design & System Obsolescence A/W : Acceptable but Monitor & Maintain CR : Crown U : Unacceptable En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.06	Rating **	U	Issue No.		4	
LIVI Start	0.00						
LM End	0.06	Issue Type +	Ма	Location *		WS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Category				Start		End	
Item	Vegetatio	n		37.8073	05°	37.807305°	
item				-121.4087	02 °	-121.408702 °	
DWR ID	DWR_RD2	089_02_s _ 201	2_4				
		Comn	nent Cod	de			
V4 : Elderk	perries are	blocking visib	ility and	flood fight	capa	ability.	
		Inspecto	or Comm	nent			
	-						

No Photos

LM Start	0.16	Rating **	U	Issue No.	48		
LM End	0.16	Issue Type +	Ма	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Item	Animal Co	ontrol		37.8085	83°	37.808583°	
item				-121.4094	32 °	-121.409432°	
DWR ID DWR_RD2089_02_f _ 2013_48							
	Comment Code						

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment



View of the rodent burrow on the landside levee slope.

A: Acceptable
M: Minimally Acceptable
U: Unacceptable

N: Not Inspected/Rated C: Corrected A/W: Acceptable but Monitor & Maintain + Issue Type
Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

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# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.20	Rating **	М	Issue No.		46	
LM End	0.21	Issue Type +	Issue Type + Ma Location *			WS	
Category	Supplemental				GPS Latitude/Longitude		
Calegory				Start		End	
Item	2017 Stor	m Damage		37.80910	00°	37.809200°	
пеш				-121.40980	00°	-121.409900°	
DWR ID	LMA-415						

### Inspector Comment

Comment Code

Levee Evaluation Comments

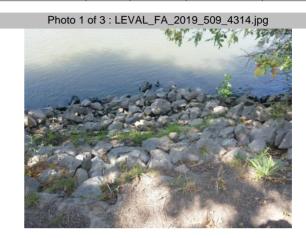
Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

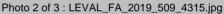
Site ID No:509

Site Designation:LMA-415 Repair Type: Erosion Rating:Area of Concern Field Date:8/16/2017

Notes: Displaced riprap at toe.

LM Start	0.20	Rating **	М	Issue No.	46 (cont)
LM End	0.21	Issue Type +	Ma	Location *	WS







### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.20	Rating **	М	Issue No.		46 (cont)		
LM End	0.21	Issue Type +	Ма	Location *		WS		
Category	Supplemental				GPS Latitude/Longitude			
Calegory				Start		End		
Item	2017 Stor	m Damage		37.80910	00°	37.809200°		
пеш				-121.40980	00°	-121.409900°		
DWR ID	LMA-415							

Comment Code

Inspector Comment Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:509

Site Designation:LMA-415 Repair Type: Erosion Rating:Area of Concern Field Date:8/16/2017

Notes: Displaced riprap at toe.



LM Start	0.21	Rating **	М	Issue No.		49	
LM End	0.21	Issue Type +	Ма	Location *		LS	
Category	Earthen L	evee		GPS Lat	ituc	le/Longitude	
Calegory				Start		End	
Item	Animal Co	ontrol		37.80914	8°	37.809148	0
пеш				-121.40989	7°	-121.409897	0
DWR ID	DWR_RD2	089_02_s _ 201	8_49				
		Comn	nent Cod	le			

# A3: No rodents visible, but rodent burrows visible; need to backfill and

compact or grout burrows.

### Inspector Comment

Photo 1 of	1 : FA_2019_RD208	39_317_49_2019083	0_00052.jpg
1			100



View of the multiple rodent burrows on the landside levee hinge and slope.

CR : Crown

Acceptable Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected

A/W : Acceptable but Monitor & Maintain

Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.26	Rating **	М	Issue No.		24	
LM End	0.26	Issue Type +	Ма	Location *		LS	
Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Animal Co	ontrol		37.8097	17°	37.809717°	
item				-121.4105	11 °	-121.410511 °	
DWR ID DWR_RD2089_02_s _ 2012_24							
טואאט	DWR ID   DWR_RD2089_02_s _ 2012_24						

Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment



View of active burrows, ground squirrel sighted in area. 05/24/2011

LM Start	0.28	Rating **	U	Issue No.		51
LM End	0.28	Issue Type +	Ma	Location *		LS
Catagoria Earthen Levee				GPS Latitude/Longitude		
Category				Start		End
Item	Animal Co	ontrol		37.8098	99°	37.809899 °
item			-121.4108	89°	-121.410889 °	
DWR ID						

Comment Code

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment





View of the rodent burrow on the landside levee toe.

LM Start	0.30	Rating **	U	Issue No.		53	
LM End	0.31	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Animal Co	ontrol		37.8099	77°	37.810022	0
пеш				-121.4111	89°	-121.411387	٥
DWR ID	DWR RD2	089 02 f 201	3 53				

Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment



View of the multiple rodent burrows on the landside levee slope.

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Minimally Acceptable C: Corrected U: Unacceptable AW: Acceptable but Monit

C : Corrected

A/W : Acceptable but Monitor & Maintain

FINAL DATA

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.30	Rating **	U	Issue No.	53 (cont)			
LM End	0.31	Issue Type +	Ma	Location *		LS		
Category	evee		GPS La	atitud	e/Longitude			
Calegory			Start		End			
Item	Animal Co	ontrol		37.8099	77°	37.810022°		
пеш				-121.4111	89°	-121.411387°		
DWR ID	DWR ID DWR_RD2089_02_f _ 2013_53							
		Comn	nent Cod	de				
A1 : Extern	minate rod	ents and back	fill and o	compact or	grou	t burrows.		
		Inspecto	or Comm	nent				

LM Start	0.30	Rating **	U	Issue No.	53 (cont)
LM End	0.31	Issue Type +	Ma	Location *	1 9



View of the rodent burrow on the landside levee slope.

Photo 3 of 3: FA\_2019\_RD2089\_317\_53\_20190830\_00060.jpg



Another view of the multiple rodent burrows on the landside levee slope.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.32	Rating **	A/W	Issue No.		47
LM End	0.57	Issue Type +	Ма	Location *		WS
Category		GPS La	titud	e/Longitude		
Calegory				Start		End
Item	2017 Stor	m Damage		37.8100	20°	37.811810°
пеш				-121.4115	50°	-121.415390°
DWR ID	335-103					

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description: Site ID No:109

Site Designation:335-103 Repair Type: Erosion Rating:Area of Concern Field Date:6/7/2017

Notes: vegetation too dense for evaluation

	2.1	1		
		Au market	- At.	-
Jane Jane				
		Sec.		
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A STATE OF THE STA		Market Control		
			THE RESERVE	
in				
The second second		* * *		s i
24			PM 2:03 JUN/	7/2017
- Application	STATE OF STA	A STATE OF THE PARTY OF THE PAR	4	

Photo 1 of 3: LEVAL\_FA\_2019\_109\_1297.jpg

LM Start	0.32	Rating **	A/W	Issue No.	47 (cont)
LM End	0.57	Issue Type +	Ma	Location *	WS



\* Location LS: Land Side

WS: Water Side

CR : Crown

N/A: Not Applicable

A : Acceptable M : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated C : Corrected

+ Issue Type Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.32	Rating **	A/W	Issue No.		47 (cont)
LM End	0.57	Issue Type +	Ma	Location *		WS
Category		GPS La	titud	e/Longitude		
Calegory			Start		End	
Item	2017 Stor	m Damage		37.8100	20°	37.811810°
пеш				-121.4115	50°	-121.415390°
DWR ID	335-103					

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description: Site ID No:109

Site Designation:335-103 Repair Type: Erosion Rating:Area of Concern Field Date:6/7/2017

Notes: vegetation too dense for evaluation



LM Start	0.34	Rating **	М	Issue No.		55	
LM End	0.34	Issue Type +	Ма	Location *		LS	
Category	Earthen L	evee		GPS La	titud	le/Longitude	
Calegory			Start		End		
Item	Trim / Thin Trees			37.8100	52°	37.810052°	
itein			-121.4119	66°	-121.411966°		
DWR ID DWR_RD2089_02_s _ 2017_55							
	Comment Code						

T1 : Trim trees to at least five feet above ground level.

Inspector Comment



View of the overgrown tree on the levee slope.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.36	Rating **	М	Issue No.		26		
LM End	0.36	Issue Type +	Ма	Location *		LS		
Category	Earthen L	evee		GPS La	atitud	e/Longitude		
Calegory				Start		End		
Item	Animal Co	ontrol		37.8101	25°	37.810125°		
item				-121.4123	-121.412317° -12			
DWR ID	DWR_RD2	089_02_s _ 201	2_26					
		Comn	nent Cod	de				
A3 : No roo compact o		le, but rodent rows.	burrows	visible; ne	ed to	backfill and		
		Inspecto	or Comm	nent				



View of active rodent burrow. 05/24/2011

LM Start	0.39	Rating **	U	Issue No.		7		
LM End	0.39	Issue Type +	Ma	Location *	CR			
Category	Earthen L	evee		GPS Latitude/Longitude				
Calegory	Start							
Item		rface / Depres	ssions /	37.8101	40°	37.810140°		
пеш	Rutting			-121.4129	06°	-121.412906°		
DWR ID DWR_RD2089_02_f _ 2018_7								
	Comment Code							

C2: Repair depressions or ruts in the crown or slope.

Inspector Comment



View of depresson greater that six inches on levee crown. (Fall 2018)

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.39	Rating **	A/W	Issue No.		50
LM End	0.41	Issue Type +	Ма	Location *		WS
Category	Supplemental			GPS Latitude/Longitude		
Calegory				Start		End
Item	2017 Stor	m Damage		37.81015	0 °	37.810270°
пеш				-121.41293	0 °	-121.413240°
DWR ID	LMA-414					·

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:508

Site Designation:LMA-414 Repair Type: Erosion

Rating:Serious Field Date:8/16/2017

Notes: Large erosion around tree with a 12' vertical cut.

LM Start	0.39	Rating **	A/W	Issue No.	50 (cont)
LM End	0.41	Issue Type +	Ma	Location *	WS



Photo 2 of 3: LEVAL\_FA\_2019\_508\_4323.jpg



U : Unacceptable

Minimally Acceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.39	Rating **	A/W	Issue No.		50 (cont)
LM End	0.41	Issue Type +	Ma	Location *		WS
Category	Supplemental			GPS Latitude/Longitude		
Calegory	Category					End
Item	2017 Stor	m Damage		37.8101	50°	37.810270
пеш				-121.41293	30°	-121.413240
DWR ID	LMA-414					

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:508

\* Location

Site Designation:LMA-414 Repair Type: Erosion Rating:Serious Field Date:8/16/2017

Notes: Large erosion around tree with a 12' vertical cut.



+ Issue Type
Ma : Maintel
Ob : Design

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.40	Rating **	A/W	Issue No.		1
LM End	0.41	Issue Type +	Ма	Location *		
Category	Suppleme	ental		GPS Latitude/Longitude		
Calegory				Start		End
Item	DWR Ero	sion Survey		37.80996	0°	37.809960 °
пеш				-121.41320	00°	-121.413200°
DWR ID	RD2089U0	2RM28.35				·

#### Inspector Comment

Comment Code

Site ID: RD2089U02RM28.35

09/26/2019: No significant change observed.

09/13/2017: No significant change observed.

09/26/2016: The erosion site was visited by land survey instead of water surface survey due to the dense water grass in the river this year. No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: No significant change observed.

08/07/2012: The site has been visited by boat survey. No significant change observed.

08/23/2011: No significant change observed on site.

09/07/2010: Site consists of a jutting rip rap that has created an eddy, scouring the levee slope. Most sections of the toe and lower slope are lined with rip rap. However, the rip rap is sloughing on the mid slope and at the toe, exposing the underlying soils and tree roots. The remaining revetment is no longer adequately protecting the slope. There are 3 Sycamore trees at the toe with exposed tree roots. 08/05/2010: Recommended for repair, per CLRO.

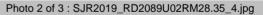
09/28/2009: Pocket erosion on lower slope just above the toe rip rap; protruding rip rap upstream is creating an eddy, scouring the levee slope; Site # is the same as RM28.40,LM0.30; previously rated "U"; pictures will be made available during the next survey.

11/05/2008: Cut into levee profile; riprap slide; rodent holes; pictures do not match GPS and current condition.

LM Start	0.40	Rating **	A/W	Issue No.	1 (cont)
LM End	0.41	Issue Type +	Ma	Location *	



Looking at the erosion from levee top.





Close-up view of the erosion.

\* Location

LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown

\*\* Rating

A : Acceptable N : Not Inspected/Rated M: Minimally Acceptable CR : Corrected U: Unacceptable A/W : Acceptable but Monitor & Maintain

\*\* Rating

A : Not Applicable M: Not Inspected/Rated M: Minimally Acceptable D: C: Corrected Ob: Design & System Obsolescence En: Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.40	Rating **	A/W	Issue No.		1 (cont)
LM End	0.41	Issue Type +	Ма	Location *		
Category	Suppleme	ental	GPS Latitude/Longitude			
Calegory				Start		End
Item	DWR Ero	sion Survey		37.80996	o°	37.809960 °
пеш				-121.41320	)°	-121.413200 °
DWR ID	RD2089U0	2RM28.35				

#### Inspector Comment

Comment Code

Site ID: RD2089U02RM28.35

09/26/2019: No significant change observed.

09/13/2017: No significant change observed.

09/26/2016: The erosion site was visited by land survey instead of water surface survey due to the dense water grass in the river this year. No significant change observed.

06/25/2015: No significant change observed.

07/02/2014: No significant change observed.

08/13/2013: No significant change observed.

08/07/2012: The site has been visited by boat survey. No significant change observed.

08/23/2011: No significant change observed on site.

09/07/2010: Site consists of a jutting rip rap that has created an eddy, scouring the levee slope. Most sections of the toe and lower slope are lined with rip rap. However, the rip rap is sloughing on the mid slope and at the toe, exposing the underlying soils and tree roots. The remaining revetment is no longer adequately protecting the slope. There are 3 Sycamore trees at the toe with exposed tree roots. 08/05/2010: Recommended for repair, per CLRO.

09/28/2009: Pocket erosion on lower slope just above the toe rip rap; protruding rip rap upstream is creating an eddy, scouring the levee slope; Site # is the same as RM28.40,LM0.30; previously rated "U"; pictures will be made available during the next survey.

11/05/2008: Cut into levee profile; riprap slide; rodent holes; pictures do not match GPS and current condition.

(in
14

Close-up view of the erosion.

LM Start	0.43	Rating **	М	Issue No.		61
LM End	0.43	Issue Type +	Ma	Location *	LS	
Category Earthen Levee				GPS Latitude/Longitude		
Category				Start		End
Item	Trim / Thin Trees				78°	37.810378°
-121.413415 ° -121.413415						-121.413415°
DWR ID DWR_RD2089_02_f _ 2019_61						
Comment Code						

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

\*Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Maintenance Deficiancy

M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

AW: Acceptable but Monitor & Maintain En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.44	Rating **	М	Issue No.		34	
LM End	0.44	Issue Type +	Ma	Location *		LS	
Category	evee	GPS La	atitud	e/Longitude			
Calegory				Start		End	
Item	Encroachi		37.8105	09°	37.810509°		
item				-121.4136	24 °	-121.413624°	
DWR ID DWR_RD2089_02_s _ 2019_34							
Comment Code							
PR : Prunings							
Inspector Comment							

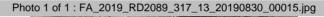
No Photos

LM Start	0.46	Rating **	М	Issue No.		13	
LM End	0.46	Issue Type +	Ma	Location *		CR	
Category	Catagory Earthen Levee				GPS Latitude/Longitude		
Category				Start		End	
Item	Animal Control			37.8106	91 °	37.810691 °	
item				-121.4140	14°	-121.414014°	
DWR ID	DWR_RD2	089_02_s _ 201	2_13				

#### Comment Code

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

### Inspector Comment





View of two large burrows on crown, need to be filled. 11/10/2011

LM Start	0.47	Rating **	М	Issue No.		10
LM End	0.47	Issue Type +	Ma	Location *	CR	
Category	evee	GPS Latitude/Longitude				
Category	Category					End
Item	Crown Surface / Depressions /				14°	37.810714°
пеш	Rutting			-121.4140	57°	-121.414057°
DWR ID DWR_RD2089_02_s _ 2012_10						
Comment Code						

C3: Add appropriate gravel or road base. Grade and compact.

Inspector Comment



Depression in crown needs to be filled. 11/10/2011

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

A/W : Acceptable but Monitor & Maintain

+ Issue Type Ma: Maintenance Deficiancy Ob : Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.50	Rating **	U	Issue No.		54	
LIVI Start							
LM End	0.50	Issue Type +	Ma	Location *		LS	
Category	evee	GPS La	atitud	e/Longitude			
Category		Start		End			
Item	Animal Co		37.8109	989°	37.810989°		
item				-121.4145	17°	-121.414517°	
DWR ID DWR_RD2089_02_f _ 2013_54							
Comment Code							
A1 : Exterminate rodents and backfill and compact or grout burrows.							
Inspector Comment							



View of the rodent burrow on the landside levee slope.

LM Start	0.52	Rating **	М	Issue No.		14	
LM End	0.52	Issue Type +	Ма	Location *		WS	
Category	evee	GPS Latitude/Longitude					
Calegory			Start		End		
Item Erosion / Bank Caving				37.8111	50°	37.811150°	
				-121.4147	48 °	-121.414748°	
DWR ID DWR_RD2089_02_s _ 2012_14							
Comment Code							

Comment Code

E2 : Schedule repair of erosion site prior to the next inspection.

### Inspector Comment

Repair damage to slope caused by livestock.

# Photo 1 of 1: FA\_2019\_RD2089\_317\_14\_20190830\_00016.jpg



View of the approximately 1' scarp that has been created by livestock travel. 11/10/2011

LM Start	0.54	Rating **	М	Issue No.		35	
LM End	0.54	Issue Type +	Ма	Location *	CR		
Category	evee	GPS Latitude/Longitude					
Odicgory		Start		End			
Item	Crown Surface / Depressions /				82°	37.811382°	
item	Rutting		-121.4150	54°	-121.415054°		
DWR ID DWR_RD2089_02_f _ 2015_35							
Comment Code							
C2 : Repair depressions or ruts in the crown or slope.							
Inspector Comment							



View of the levee crown depression looking upstream.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.54	Rating **	M	Issue No.	35 (cont)			
LM End	0.54	Issue Type +	Ма	Location *	CR			
Category	Earthen L	evee		GPS La	atitud	le/Longitude		
Category				Start		End		
Item	Crown Su	rface / Depres	ssions /	37.8113	82°	37.811382°		
пеш	Rutting			-121.4150	54°	-121.415054 °		
DWR ID	DWR ID DWR_RD2089_02_f _ 2015_35							
		Comn	nent Coo	le				
C2 : Repai	r depressi	ons or ruts in	the crow	n or slope.				
		Inspecto	or Comm	ent				

LM Start	0.54	Rating **	М	Issue No.	35 (cont)
LM End	0.54	Issue Type +	Ma	Location *	CR



View of the levee crown depression looking downstream.

Photo 3 of 4: FA\_2019\_RD2089\_317\_35\_20190830\_00036.jpg



View of the levee crown depression looking to the landside.

LM Start	0.54	Rating **	М	Issue No.	35 (cont)
LM End	0.54	Issue Type +	Ma	Location *	CR



View of the levee crown depression looking to the waterside.

\*Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable A: Not Inspected/Rated M: Minimally Acceptable CR: Corrected U: Unacceptable U: Unacceptable U: Unacceptable AW: Acceptable but Monitor & Maintain Enforcement

\* Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.60	Rating ** A/W		Issue No.		56
LM End	0.61	Issue Type +	Ma	Location *	* WS	
Category Supplemental				GPS Latitude/Longitude		
Calegory						End
Item	2017 Stor	m Damage		37.8120	00°	37.812100°
пеш				-121.4157	00°	-121.415900 °
DWR ID	LMA-413					

Comment Code

Inspector Comment
Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:507

Site Designation:LMA-413
Repair Type: Erosion

Rating:Serious Field Date:8/16/2017

Notes: Vertical cut on outside bend of river

LM Start	0.60	Rating **	A/W	Issue No.	56 (cont)
LM End	0.61	Issue Type +	Ma	Location *	WS



Photo 2 of 3: LEVAL\_FA\_2019\_507\_4336.jpg



## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.60	Rating **	A/W	Issue No.		56 (cont)	
LM End	0.61	Issue Type +	Ma	Location *		WS	
Category	Supplemental				GPS Latitude/Longitude		
Calegory			Start		End		
Item	2017 Stor	m Damage		37.8120	00°	37.812100°	
пеш			-121.4157	00°	-121.415900°		
DWR ID	LMA-413					·	

### Inspector Comment

Comment Code

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:507

Site Designation:LMA-413 Repair Type: Erosion Rating:Serious Field Date:8/16/2017

Notes: Vertical cut on outside bend of river



LM Start	0.76	Rating **	М	Issue No.		15		
LM End	0.76	Issue Type +	Ма	Location *		LS		
Category Earthen Levee			GPS La	titud	e/Longitude			
Calegory	gory			Start		End		
Item	Erosion /	Bank Caving		37.81393	34°	37.813934°		
item				-121.41432	20°	-121.414320°		
DWR ID DWR_RD2089_02_f _ 2014_15								
0								

#### Comment Code

E2: Schedule repair of erosion site prior to the next inspection.

### Inspector Comment

### Photo 1 of 1: FA\_2019\_RD2089\_317\_15\_20190830\_00017.jpg



View of the scour from surface runoff on the landside levee slope.

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.83	Rating **	М	Issue No.		21
LM End	0.83	Issue Type +	Ма	Location *		WS
Category Earthen Levee			GPS Latitude/Longitude			
Calegory		Start		End		
Item	Slope Sta	bility		37.8147	73 °	37.814773°
пеш				-121.4145	55 °	-121.414555 °
DWR ID DWR_RD2089_02_s _ 2012_21						
Comment Code						

S2: Repair the levee slope damaged by foot traffic and prevent access where possible.

Inspector Comment

Livestock have worn paths into levee slope.

Rating \*\* 0.83 LM Start 0.83 Issue Type + Location \* WS LM End Ma Earthen Levee GPS Latitude/Longitude Category Start End **Animal Control** 37.814844° 37.814844° Item -121.414566° -121.414566 °

М

Issue No.

38

DWR\_RD2089\_02\_s \_ 2012\_38 DWR ID

Comment Code

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

No Photos

No Photos

LM Start	0.84	Rating **	M	Issue No.		25	
LM End	0.84	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Item	Vegetatio	n		37.8149	06°	37.814906	0
Item				-121.4147	45°	-121.414745	0
DWR ID	DWR_RD2	089_02_s _ 201	2_25				

Comment Code

V4: Elderberries are blocking visibility and flood fight capability.

Inspector Comment

No Photos

\* Location

LS: Land Side N/A: Not Applicable

WS: Water Side

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated

C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy Ob : Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.84	Rating **	M	Issue No.		42
LM End	0.84	Issue Type +	Ма	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
Calegory		Sta		Start		End
Item	Slope Sta	bility		37.81493	1°	37.814931
пеш				-121.41475	s°	-121.414756
DWR ID DWR_RD2089_02_f _ 2016_42						

#### Comment Code

S3 : Repair the levee slope damaged by vehicle traffic and prevent access where possible.

### Inspector Comment

Ramp is encroaching into the levee slope. Add appropriate material to stabilize the slope.

Photo 1 of 1: FA\_2019\_RD2089\_317\_42\_20190830\_00044.jpg



View of the ramp on the landside levee slope.

LM Start	0.85	Rating **	U	Issue No.		40	
LM End	0.90	Issue Type +	Ma	Location *	cation * LS		
Category	Earthen Levee				GPS Latitude/Longitude		
Calegory				Start		End	
Item	Animal Co	ontrol		37.8149	97°	37.814970°	
пеш			-121.4147	74°	-121.415767°		
DWR ID DWR_RD2089_02_s _ 2012_40							

### Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment

LM Start	0.85	Rating **	U	Issue No.	40 (cont)
LM End	0.90	Issue Type +	Ma	Location *	LS

### Photo 1 of 3: FA\_2019\_RD2089\_317\_40\_20190830\_00040.jpg



View of deep vertical burrow in ramp on landside of levee. 05/24/2011

### Photo 2 of 3: FA\_2019\_RD2089\_317\_40\_20190830\_00041.jpg



View of deep vertical burrow in levee crown. 05/24/2011

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

U: Unacceptable A: Acceptable but Monitor & Maintain

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Ma: Maintenance Deficiancy Ob: Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.85	Rating **	U	Issue No.	40 (cont)	
LM End	0.90	Issue Type +	Ma	Location *		LS
Category	Earthen L	evee		GPS La	atitud	e/Longitude
Calegory				Start		End
Item	Animal Control			37.8149	97°	37.814970°
item				-121.4147	-121.415767°	
DWR ID	DWR_RD2	089_02_s _ 201	12_40			
		Comn	nent Cod	de		
A1 : Exterr	minate rod	ents and back	fill and o	compact or	grou	t burrows.
	Inspector Comment					

Photo 3 of 3: FA\_2019\_RD2089\_317\_40\_20190830\_00042.jpg



View of the multiple rodent holes on the landside levee slope.

LM Start	0.86	Rating **	U	Issue No.		36	
LM End	1.34	Issue Type +	Ma	Location *	CR		
Category	evee	GPS Latitude/Longitude					
Calegory			Start			End	
Item	Vegetatio	n		37.8150	32°	37.819556°	
пеш				-121.4149	82 °	-121.419621 °	
DWR ID DWR_RD2089_02_s _ 2019_36					·		
	Comment Code						

V9: Keep the crown roadway free of vegetation.

Inspector Comment



View of vegetation on levee crown. (Spring 2019)

LM Start	0.91	Rating **	M	Issue No.		22	
LM End	0.91	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Animal Co	ontrol		37.8149	03°	37.814903	0
пеш				-121.4158	87°	-121.415887	0
DWR ID	DWR_RD2	089_02_s _ 201	5_22				

Comment Code A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

No Photos

* Location		^^
LS: Land Side	N/A: Not Applicable	
WS · Water Side		

CR : Crown

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

+ Issue Type Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	0.94	Rating **	М	Issue No.		41
LM End	0.94	Issue Type +	Ma	Location *		WS
Category	Earthen L	evee		GPS La	atitud	le/Longitude
Calegory				Start		End
Item	Encroachi	ments		37.8149	40°	37.814940°
пеш				-121.4164	99°	-121.416499 °
DWR ID	DWR_RD2	089_02_s _ 201	2_41			
		Comn	nent Cod	de		
PI : Pipe						
		Inspecto	or Comm	nent		
Debris/CM	Debris/CMP are on levee slope and needs to be removed.					

Photo 1 of 1: FA\_2019\_RD2089\_317\_41\_20190830\_00043.jpg

View of old CMP left on waterside levee slope, needs to be removed.  $\,$  05/24/2011  $\,$ 

	0.05	Dating **		Issue No.			
LM Start	0.95	Rating **	U	issue ivo.		5	
LM End	0.95	Issue Type +	Ma	Location *		LS	
Category	evee	GPS La	atitud	le/Longitude			
Odlogory				Start		End	
Item	Animal Co	ontrol		37.8149	15°	37.814915°	
item				-121.416606 °		6° -121.416606°	
DWR ID	DWR ID DWR_RD2089_02_s _ 2014_5						
		Comn	nent Cod	de			
A1 : Exterr	minate rod	ents and back	fill and o	compact or	grou	t burrows.	
		Inspecto	or Comm	nent			
		Порсок	Ji Oolilii	iciit			



View of the rodent holes on the landside levee slope.

LM Start	1.00	Rating **	U	Issue No.		12	
LM End	1.00	Issue Type +	Ma	Location *	CR		
Category	evee	GPS La	atitud	e/Longitude			
Category				Start		End	
Item	Animal Co	ontrol		37.8151	82 °	37.815182°	
пеш	-121.417439 ° -121.4174						
DWR ID	DWR ID DWR_RD2089_02_f _ 2014_12						
		Comn	nent Cod	de			
A3 : No roccompact o		le, but rodent rows.	burrows	visible; ne	ed to	backfill and	
		Inspecto	or Comm	nent			



View of several large rodent holes on the levee crown.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.00	Rating **	U	Issue No. 12 (cont)		12 (cont)
LM End	1.00	Issue Type +	Ma	Location *		CR
Category Earthen Levee			GPS Latitude/Longitude			
Calegory			Start		End	
Item	Animal Co	ontrol		37.8151	82 °	37.815182°
item				-121.4174	39°	-121.417439°
DWR ID DWR_RD2089_02_f _ 2014_12					·	
	Comment Code					

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

Photo 2 of 2: FA\_2019\_RD2089\_317\_12\_20190830\_00014.jpg



View of several rodent burrows on landside levee hinge and crown.

LM Start	1.05	Rating **	N	Issue No.		29		
LM End	1.05	Issue Type + Ma		Location *		WS		
Category	Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End		
Item	Trim / Thi	n Trees		37.8156	29°	37.815629°		
пеш			-121.4181	33°	-121.418133°			
DWR ID	DWR_RD2	089_02_s _ 201	2_29					

Comment Code

T5: Tree stumps.

Inspector Comment



View of tree stump left after vegetation and tree removal.

LM Start	1.08	Rating **	М	Issue No.		45	
LM End	1.08	Issue Type +	Ma	Location *		LS	
Catagory	Category Earthen Levee		GPS Latitude/Longit		e/Longitude		
Calegory				Start		End	
Item	Trim / Thi	n Trees		37.8159	85 °	37.815985	0
item				-121.4184	86°	-121.418486	0
DWR ID	DWR_RD2	089_02_f _ 201	9_45				Ī
		Comn	nent Cod	le			

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

Location

N/A: Not Applicable LS: Land Side WS: Water Side

: Acceptable : Minimally Acceptable

U : Unacceptable

N : Not Inspected/Rated C : Corrected

+ Issue Type

Ma : Maintenance Deficiancy Ob : Design & System Obsolescence

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.08	Rating **	М	Issue No.		17	
LM End	1.08	Issue Type +	Ma	Location *	ation * WS		
Category	evee	GPS La	atitud	e/Longitude			
Calegory				Start		End	
Item	Encroachi	ments		37.8160	25°	37.816025°	
item				-121.418544°		-121.418544°	
DWR ID	DWR_RD2	089_02_s _ 201	2_17				
		Comn	nent Cod	de			
DE : Debri	s						
Inspector Comment							
Water tanks disposed of on levee are obstructive.							

Photo 1 of 1: FA\_2019\_RD2089\_317\_17\_20190830\_00019.jpg

View of water tanks disposed on waterside slope.

LM Start	1.12	Rating **	М	Issue No.		Issue No.		30
LM End	1.12	Issue Type + Ma		Location *		WS		
Category	Earthen L		GPS Latitude/Longitude					
Calegory				Start		End		
Item	Vegetatio	n		37.8165°	4°	37.816514°		
пеш				-121.41894	18 °	-121.418948°		
DWR ID	DWR_RD2	089_02_s _ 201	2_30					

Comment Code

V4: Elderberries are blocking visibility and flood fight capability.

Inspector Comment

No Photos

LM Start	1.18	Rating **	М	Issue No.		6			
LM End	1.18	Issue Type +	Ma	Location *		LS			
Category	Category Earthen Levee				GPS Latitude/Longitude				
Calegory				Start		End			
Item	Animal Co	ontrol		37.8172	71 °	37.817271	0		
пеш				-121.4193	80°	-121.419380	0		
DWR ID	DWR_RD2	089_02_s _ 201	4_6						
		Comn	nent Coo	de					

A1: Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment



View of the large rodent hole on the landside levee slope.

Location

N/A: Not Applicable

LS: Land Side WS: Water Side

: Acceptable : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

+ Issue Type

Ma: Maintenance Deficiancy Ob : Design & System Obsolescence

A/W : Acceptable but Monitor & Maintain En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.24	Rating **	U	Issue No.	31			
LM End	1.24	Issue Type +	Ма	Location *	WS			
Catagoria Earthen Levee				GPS Latitude/Longitude				
Category		Start			End			
Item	Vegetation			37.8180	51 °	37.818051 °		
пеш				-121.419743°		-121.419743°		
DWR ID	DWR_RD2	089_02_s _ 201	2_31					
		Comn	nent Cod	de				
V4 : Elderl	perries are	blocking visib	ility and	flood fight	capa	bility.		
		Inspecto	or Comm	nent				

No Photos

LM Start	1.24	Rating **	U	Issue No.		28		
LM End	1.24	Issue Type +	Ma	Location *	LS			
Catagory	Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End		
Item	Animal Co	ontrol		37.8181	12°	37.818112°		
пеш			-121.4197	20°	-121.419720°			
DWR ID	DWR_RD2	089_02_f _ 201	6_28					

### Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment





View of the rodent burrow in the landside levee slope.

LM Start	1.26	Rating **	U	Issue No.		33
LM End	1.26	Issue Type +	Ma	Location *	CR	
Category Earthen Levee			GPS Latitude/Longitude			
Calegory				Start		End
Item	Trim / Thi	n Trees		37.81840	08°	37.818408 °
пеш				-121.41973	38°	-121.419738°
DWR ID	DWR_RD2	089_02_f _ 201	8_33			·

### Comment Code

T4: Trim trees over roadway to at least 12 feet above ground level.

### Inspector Comment



Looking west at trees overhanging crown of levee. (Fall 2018)

\* Location

LS: Land Side N/A: Not Applicable

WS: Water Side

: Acceptable : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

+ Issue Type

Ma: Maintenance Deficiancy Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

### **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.27	Rating **	М	Issue No.	44	
LM End	1.27	Issue Type +	Ма	Location *	LS	
Category Earthen Levee			GPS Latitude/Longitude			
Category		Start		End		
Item	Trim / Thi	n Trees		37.8185	74°	37.818574°
пеш				-121.4197	35 °	-121.419735 °
DWR ID	DWR_RD2	089_02_f _ 201	9_44			
Comment Code						

T3: Trim and thin trees to allow visibility of the ground and room to flood fight.

Inspector Comment

No Photos

LM Start	1.29	Rating **	U	Issue No.		19
LM End	1.29	Issue Type +	Ma	Location *	LS	
Category Earthen Levee			GPS Latitude/Longitude			
Calegory				Start		End
ltom	Animal Co	ontrol		37.8187	40°	37.818740°
Item		-121.4197	59°	-121.419759°		
DWR ID	DWR RD2	089 02 f 201	6 19			

#### Comment Code

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment



Photo 1 of 1: FA\_2019\_RD2089\_317\_19\_20190830\_00021.jpg



View of the rodent burrow in the landside levee slope.

LM Start	1.29	Rating **	A/W	Issue No.		32	
LM End	1.29	Issue Type +	Ма	Location *		WS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Vegetatio	n		37.8188	29°	37.818829	0
пеш				-121.4197	76°	-121.419776	0
DWR ID	DWR RD2	089 02 s 201	2 32				

Comment Code

V4: Elderberries are blocking visibility and flood fight capability.

Inspector Comment

No Photos

\* Location

LS: Land Side N/A: Not Applicable

WS: Water Side

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated

C : Corrected

A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

LM Start	1.29	Rating **	N	Issue No.	18		
LM End	1.29	Issue Type +	Ma	Location *	LS		
Category	evee	GPS La	atitud	e/Longitude			
Calegory	Start					End	
Itom	Item Trim / Thin Trees				43°	37.818843 °	
пеш					62°	-121.419762°	
DWR ID DWR_RD2089_02_f _ 2016_18							
		Comn	nent Cod	de			
T5 : Tree s	stumps.						
		Inspecto	or Comm	nent			

Photo 1 of 1: FA\_2019\_RD2089\_317\_18\_20190830\_00020.jpg



View of the tree stump from the levee crown.

LM Start	1.30	Rating **	U	Issue No.		16	
LM End	1.30	Issue Type +	Ма	Location *		LS	
Category	Earthen Levee			GPS Latitude/Longitude			
Calegory	tegory			Start		End	
Item	Animal Co	ontrol		37.8189	87°	37.818987°	
пеш				-121.4197	67°	-121.419767°	
DWR ID	DWR_RD2	089_02_s _ 201	5_16				

Comment Code A1: Exterminate rodents and backfill and compact or grout burrows.

Inspector Comment



View of the rodent burrow in the landside levee slope.

LM Start	1.31	Rating **	М	Issue No.		43	
LM End	1.31	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Category				Start		End	
Trim / Thin Trees		37.819036°		37.819036°			
item				-121.4197	63°	-121.419763°	
DWR ID	DWR_RD2	089_02_f _ 201	9_43				
		Comn	nent Coo	de			
T1: Trim t	rees to at	east five feet	above g	round level.			

Inspector Comment

No Photos

\* Location

N/A: Not Applicable LS: Land Side

WS: Water Side

A : Acceptable M : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated C : Corrected

+ Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2019

# **Reclamation District No. 2089 Stark**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Salmon Slough	Right	1.35	11/20/2019 11/20/2019	Alberto De Leon

		II.				
LM Start	1.33	Rating **	U	Issue No.	11	
LM End	1.33	Issue Type +	Ma	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Animal Control			37.8193	71°	37.819371 °
				-121.4197	74°	-121.419774 °
DWR ID	DWR_RD2089_02_f _ 2014_11					
Comment Code						
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.						
Inspector Comment						

Photo 1 of 1 : FA\_2019\_RD2089\_317\_11\_20190830\_00012.jpg

View of the multiple rodent burrows on the landside levee slope.

N: Not Inspected/Rated C: Corrected A/W: Acceptable but Monitor & Maintain + Issue Type
Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence
En : Enforcement